

Beating the

On a hot summer day, you might chill out by jumping into a pool. But what can a plant or an animal that lives in the desert do when the temperature soars above 38°C (100°F) and there's no water in sight? Read on to discover the amazing survival tactics of some of the world's desert dwellers.



DESERT DANCE

If you've ever visited a beach on a hot day, you know that the sun's rays can heat sand to feet-scorching temperatures. Luckily, the shovel-snouted lizard has some smooth moves to keep its sensitive feet from getting fried. The lizard props itself up on its tail. Then, it lifts its right front leg and left back leg to cool those feet in the air. After getting relief, it switches legs. The lizard repeats this dance over and over.

When the sand gets too hot for the dance moves to work, the lizard uses its strong toes and shovel-like snout to "swim" under the surface of the sand. Heat from the sun is slow to penetrate the sand. So it is much cooler under the surface.

Heat

WHEN IT COMES
TO SURVIVING
IN THE DESERT,
IT HELPS TO KNOW
SOME COOL TRICKS

SHADY CHARACTER

Most desert animals stay out of sight during the day. That's because daytime temperatures can be as much as 27°C (80°F) hotter than the temperature at night. But the Cape ground squirrel goes out even when the sun is high in the sky.

The squirrel keeps cool by curling its tail over its body. Light-colored fur on the tail **reflects** the sun's hot rays. This umbrella gives the squirrel an advantage over other animals. "It can nibble plants in the hottest part of the day when most of its predators are asleep," says Mark Dimmitt, a scientist who studies desert organisms.



WATER SAVERS

Cactus plants have special adaptations that enable them to hold onto precious water in the desert. Like all plants, cacti use **photosynthesis** to make their own food to grow. To do this, they have to open pores called **stomata** and gather carbon dioxide gas from the air. But as the stomata open, water **evaporates** from their cells—causing most plants to dry out.

To stay moist, a cactus opens its stomata at night and stores the carbon dioxide. “The plant finishes the photosynthesis process the next day,” says Dimmitt. By only opening their stomata at night when it’s cooler, cacti lose one-tenth as much water as they would during the day.



IN A FOG

Deserts receive an average of less than 25 centimeters (10 inches) of rain a year. So animals that live there use unusual methods to get the water they need. The fog-basking beetle does a handstand to snatch a drink right from the air.

In deserts where this beetle lives, the air at night is often foggy. During those times, the little beetle climbs to the top of a sand dune. It raises its back end in the damp breeze. Water in the fog **condenses** on the beetle’s cool body. The water flows down the beetle’s back and into its mouth.

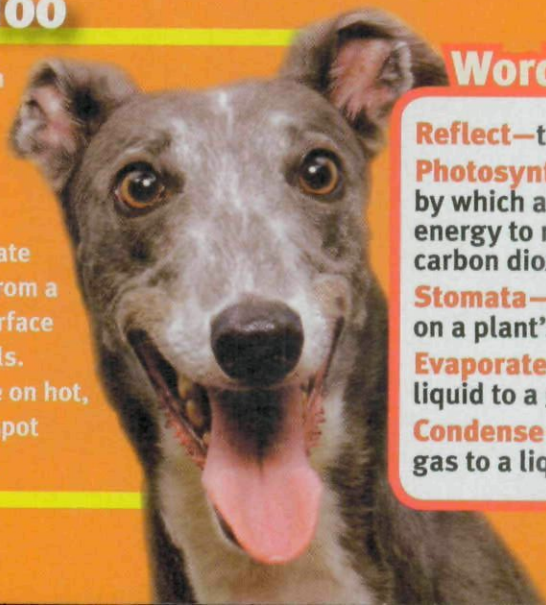
—Claire Miller



Pets Stay Cool Too

They may not live in the desert, but even pet dogs and cats need to keep from getting overheated. When they get too hot, dogs hang their drippy tongues out of their mouths and pant. Cats pant too. This fast breathing causes water to evaporate from their tongues. As the water changes from a liquid to a gas, it removes heat from the surface of the tongue. That helps to cool the animals.

Still, dogs and cats don’t like to exercise on hot, sunny days. They prefer to rest in a shady spot where there’s plenty of cool water to drink.



Words to Know

Reflect—to bounce back

Photosynthesis—the process by which a plant uses the sun’s energy to make sugar from carbon dioxide gas and water

Stomata—pores or openings on a plant’s outer surface

Evaporate—to change from a liquid to a gas

Condense—to change from a gas to a liquid

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